

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1-31. (Cancelled)

32. (Currently amended) A motor-driven tool for applying an implantation force to a helical fastener sized and configured for penetration in tissue ~~in response to the implantation force applied according to prescribed conditions, the motor-driven tool comprising:~~
- a tool body; [[.]]
 - a drive motor carried in the tool body; [[.]]
 - a driven member coupled to the drive motor, ~~the driven member being~~ carried by the tool body and ~~being~~ operable to apply the implantation force during operation of the drive motor; [[.]]
 - a carrier on the driven member configured to couple the fastener to the driven member to transfer the implantation force from the driven member to the fastener; [[.]] and
 - a motor control unit carried in the tool body, ~~and being~~ coupled to the drive motor, ~~and the motor control unit being~~ conditioned to operate the drive motor in phases including:
 - an initial phase operating the carrier to transfer the implantation force to the fastener under conditions that ~~result in are short of the prescribed conditions so that~~ only partial implantation of the fastener, with a distal portion of the fastener penetrating tissue such that the distal portion is implanted into the tissue, while a proximal portion of the fastener is retained within the tool body occurs and ~~the fastener~~ remains coupled to the carrier,
 - a lull phase commencing at the end of the initial phase interrupting operation of the carrier, and
 - a final phase operating the carrier ~~under conditions that supplement the conditions of the initial phase to achieve the prescribed conditions to~~ release the fastener therefrom ~~from the carrier~~ and implant the fastener in tissue,

~~wherein after automatically entering the lull phase, the motor control unit requires requiring, after automatically entering the lull phase, a prescribed~~ final phase command to advance from the lull phase to the final phase.

33. (Currently amended) A motor-driven tool according to claim 32₁ wherein the ~~prescribed~~ final phase command is based, at least in part, upon input from an operator.
34. (Currently amended) A motor-driven tool according to claim 32₁ wherein the ~~prescribed~~ final phase command is based, at least in part, upon input reflecting a sensed operating condition.
35. (Currently amended) A motor-driven tool according to claim 32₁ wherein the driven member is also operable to apply a removal force to withdraw the fastener from tissue, and wherein the motor control unit includes a removal phase operating the carrier to transfer the removal force to the fastener, the motor control unit requiring, after automatically entering the lull phase, a ~~prescribed~~ removal phase command different ~~from~~ than the ~~prescribed~~ final phase command to advance from the lull phase to the removal phase.
36. (Currently amended) A motor-driven tool according to claim 35₁ wherein the carrier is rotated in one direction to apply the implantation force and rotated in an opposite direction to transfer the removal force.
37. (Withdrawn, Currently amended) A motor-driven tool according to claim 32₁ further including an element tethering the fastener to the tool body, the element including a frangible portion.
38. (Currently amended) A motor-driven tool according to claim 32₁ wherein the tool body comprises a tubular member that carries the driven member and the carrier.

39. (Currently amended) A motor-driven tool according to claim 32, wherein the driven member is rotated to apply the implantation force.
- 40-43. (Cancelled)
44. (Currently amended) A method for implanting a helical fastener in tissue comprising: ~~the steps of~~
- providing a motor-driven tool as defined in claim 32; [[,]]
 - coupling a helical fastener to the carrier; [[,]]
 - accessing a tissue region; [[,]]
 - operating the motor control unit in the initial phase to partially implant the fastener in the tissue region; [[,]]
 - deciding during the lull phase to commence the final phase; [[,]] and
 - entering the ~~prescribed~~ final phase command to advance the motor control unit from the lull phase to the final phase, thereby completing the implantation of the fastener in the tissue region.
- 45-48. (Cancelled)
49. (New) A motor-driven tool according to claim 32, wherein the tool body comprises internal threads.
50. (New) A motor-driven tool according to claim 49, wherein the proximal portion of the fastener is retained within the internal threads of the tool body at the end of the initial phase.
51. (New) A motor-driven tool according to claim 32, wherein the carrier comprises a distal portion having a configuration that corresponds to a configuration of a proximal end of the fastener, such that the proximal end of the fastener engages with the distal portion of the carrier to couple the fastener to the carrier throughout the initial phase.

52. (New) A motor-driven tool according to claim 51, wherein the proximal end of the fastener comprises a leg portion that engages with the distal portion of the carrier throughout the initial phase.
53. (New) A motor-driven tool according to claim 32, wherein the motor-driven tool is configured to carry and deploy a single helical fastener at a time.
54. (New) A motor-driven tool according to claim 32, wherein the motor-driven tool is configured to rotatably drive the fastener into tissue.
55. (New) A motor-driven tool according to claim 32, wherein the motor control unit comprises a programmable microprocessor configured to automatically transition the drive motor from the initial phase to the lull phase.
56. (New) A motor-driven tool for applying an implantation force to a helical fastener sized and configured for penetration in tissue comprising:
- a tool body comprising a tubular member comprising internal threads;
 - a drive motor carried in the tool body;
 - a driven member coupled to the drive motor, disposed within the tubular member of the tool body and operable to apply the implantation force during operation of the drive motor;
 - a carrier disposed on the driven member and within the tubular member of the tool body, the carrier configured to couple the fastener to the driven member to transfer the implantation force from the driven member to the fastener, the carrier comprising a distal portion having a configuration that corresponds to a configuration of a proximal end of the fastener; and
 - a motor control unit carried in the tool body, coupled to the drive motor, and conditioned to operate the drive motor in phases including:

an initial phase operating the carrier to transfer a partial implantation force to the fastener so that a distal portion of the fastener penetrates tissue and is implanted into the tissue, and a proximal portion of the fastener is retained within the internal threads of the tool body, wherein the proximal end of the fastener engages with the distal portion of the carrier to couple the fastener to the carrier throughout the initial phase,

a lull phase commencing at the end of the initial phase interrupting operation of the carrier, and

a final phase operating the carrier to release the fastener therefrom and implant the fastener in tissue,

wherein after automatically entering the lull phase, the motor control unit requires a final phase command to advance from the lull phase to the final phase.

57. (New) A motor-driven tool according to claim 56, wherein the proximal end of the fastener comprises a leg portion that engages with the distal portion of the carrier throughout the initial phase.